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(54) Title: MICROPARTICLES AND METHODS FOR THEIR PRODUCTION

(57) Abstract: Microparticles having a metal-containing core encapsulated in a graphitic shell containing hetero atoms are made by forming, in a liquid medium, colloidal particles containing a metal-oxo species of Fe, Co, Ni and Pd, colloidally stabilized by a surfactant and containing source material of carbon and the hetero atoms. These particles are pyrolyzed in inert gas to yield the microparticles. In an alternative method, silica gel coated particles are formed by colloidally stabilizing particles containing metal species and forming silica at the boundary of the stabilized particle.